



FiltoClear

5000, 13000, 19000, 31000

Original operating manual.

- Disconnect all electrical units in the water from the power supply before reaching into the water. Otherwise there is a risk of injuries or death by electrocution.
- This unit can be used by children aged 8 and above and by persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they are supervised or have been instructed on how to use the unit in a safe way and they understand the hazards involved. Do not allow children to play with the unit. Only allow children to carry out cleaning and user maintenance under supervision.

Safety information

Electrical connection

- Special regulations apply to electrical installation in outdoor areas. Only allow a qualified electrician to perform the electrical installation.
 - The qualified electrician has the required professional training, knowledge and skills to perform electrical installations in outdoor areas. The qualified electrician can detect potential risks and adheres to regional and national standards, regulations and directives.
 - For your own safety, please consult a qualified electrician.
- Only connect the unit if the electrical data of the unit and the power supply match.
- Only plug the unit into a correctly installed outlet. Ensure that the unit is fused for a rated fault current of max. 30 mA by means of a fault current protection device.
- Extension cables and power distributors (e.g. outlet strips) must be suitable for outdoor use (splash-proof).
- Protect open plugs and sockets from moisture.

Safe operation

- Do not use the unit, if electrical lines or the housing are damaged.
- A damaged connection cable cannot be replaced. Dispose of the unit.
- Do not carry or pull the unit by its power cable.
- Never make technical modifications to the unit.
- Only carry out work on the unit that is described in this manual.
- Only use original spare parts and accessories.
- Route lines so that they are protected from damage and nobody can trip over them.
- Should problems occur, please contact the authorized customer service or OASE.

Intended use

Only use the product described in this manual as follows:

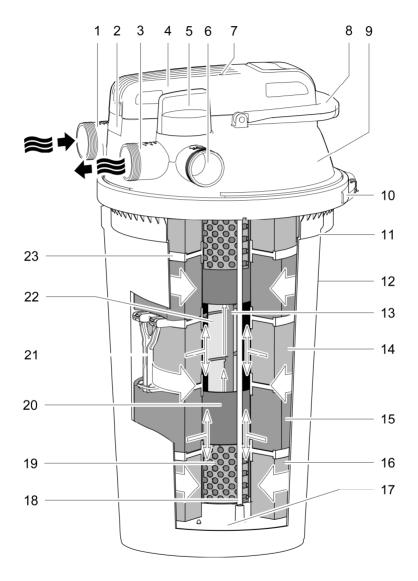
- For mechanical and biological cleaning of garden ponds
- In compliance with the technical specifications. (\rightarrow Technical data)

The following restrictions apply to the unit:

- This product is not suitable for general lighting, but is only intended for the purpose described here.
- Never operate the UVC lamp outside the casing or use it for any other purpose. The UVC radiation is harmful to the eyes and skin even in small doses.
- Never use the unit with fluids other than water.
- Do not use in conjunction with chemicals, foodstuff, easily flammable or explosive substances.
- Never run the unit without water.
- Do not use for commercial or industrial purposes.

Product description

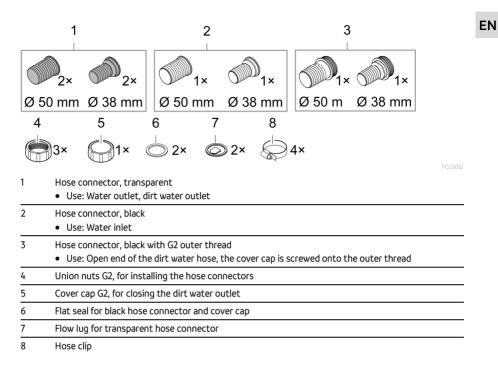
Overview



Downloaded from www.watergardeningdirect.com

1	Water inlet for the pond water being cleaned • Connection G2					
2	Opening ring with locking screw for locking the UVC unit head It is necessary to open the opening ring in order to remove the UVC unit head. 					
3	Water outlet for the cleaned pond water • Connection G2					
4	UVC unit head with temperature monitorThe UVC clarifier shuts down when overheating and automatically turns on again after it has cooled down					
5	Turning valve for switching between water outlet and dirt water outlet					
	Water filtration and UVC radiation					
	Cleaning the foam filters					
6	Dirt water outlet for the dirt water when cleaning the foam filtersConnection G2					
7	Indicator lamp for checking the function of the UVC clarifier					
8	Cleaning handle Pull to compress the foam filters and flush out the dirt particles 					
9	Filter cover					
10	Clamping ring for fastening the filter cover on the container					
11	Marking for max. burying depth					
12	Container					
13	Cleaning rotor, cleans the quartz glass during operation Only for FiltoClear 19000, 31000 					
14	Foam filter, blue (10 ppi)					
15	Foam filter, red (30 ppi)					
16	Foam filter, purple (20 ppi)					
17	Closing disc for foam filters, is connected with both cleaning rods					
18	Cleaning rod, connecting cleaning handle and closing disc					
19	Meshed tube, maintaining the distance between the foam filters and the UVC water housing					
20	UVC water housing, conveying water to the UVC lamp					
21	Spacers that connect the two spacer discsThe spacers prevent the foam filters from being compressed by the weight of the foam filters above them					
22	Quartz glass with internal UVC lamp					
23	Spacer disc, placed between each pair of foam filters					





Function description

The filter pump pushes the water into the pressure-tight container where it passes through several cleaning stages before returning into the pond.

Cleaning stage "Filtration"

The water flows through the foam filters. Mechanical soiling is retained by the foam filters. Suspended matter and bio sludge settle on the container bottom. Useful bacteria settle on the foam filters, cleaning the water biologically. Their effect starts at a water temperature of +10 $^{\circ}$ C.

Foam filter	Properties
Blue (10 ppi)	High flow rate
Purple (20 ppi)	Colonisation of bacteria for nitrification, which turns ammonia first into ni- trite, then into nitrate
Red (30 ppi)	Lower flow rate Colonisation of bacteria for nitrification and denitrification, which turns ni- trate into nitrogen

Cleaning stage "UVC radiation"

Water is subjected to UV-C light from the UVC clarifier. Green algae die, pathogenic agents are killed.

Bypass

The bypass ensures that only approx. 70 % of the water is subjected to UV-C light. This guarantees sufficient radiation even at high flow rates.

Biological cleaning effect

The maximum biological cleaning effect is achieved when the foam filters are fully colonised by filter bacteria. On new foam filters, colonisation may take several weeks. Adding starter bacteria can significantly speed up colonisation.

Cleaning the foam filters

You can use the soiled water from cleaning the foam filters to fertilise your garden.

Recommended filter pump

	FiltoClear				
	5000	13000	19000	31000	
AquaMax Eco Premium	4000	8000	12000	16000	

Symbols on the unit

IP68 <u></u>	The unit is dust-proof, fully protected against contact and protected from con- tinuous immersion in water to a depth of 0.1 m.
	Dangerous UVC radiation
<i>茶</i>	Protect the unit from direct sunlight
*	Protect the unit from freezing temperatures
X	Do not dispose of the unit with normal household waste
<u>A</u> [i]	Read the operating series instructions

Installation and connection

Installing the unit

To be taken into consideration for planning:

- For operation at a swimming pond: Install the unit at a distance of at least 2 m from the water.
- For operation at a pond: You can set up the unit directly at the edge of the pond.
- Protect the pressure filter from direct sunlight.
- Route the return hose into the pond so that the water returns to the pond e.g. through a water course. This enriches the water with additional oxygen.
- Ensure that the inlet into the pond is max. 2 m above the filter cover.

Burying the pressure filter

A buried container is barely visible. The stone grey FiltoCap (Art. No. 77831) cover available as an accessory for the filter cover fits seamlessly into the pond scape.

- Dig a hole close to the pond and place the container in the hole down to the maximum burying depth.
- The ground must be firm and horizontal.



FiltoClear	Burying depth h
5000	0.12 m
13000	0.24 m
19000	0.36 m
31000	0.48 m

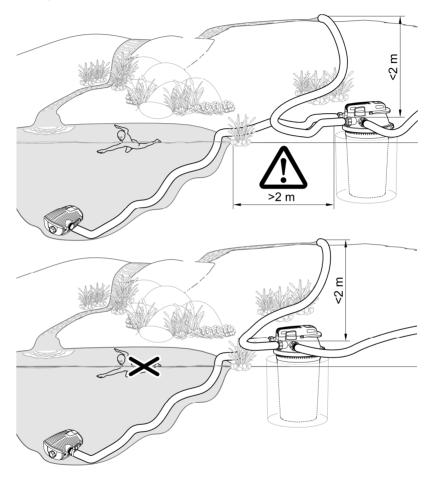
35

EN

Installing the pressure filter on level ground

If you choose not to bury the pressure filter, position it so that it is hidden from sight e.g. covered by bushes.

- Install the unit near the pond.
- The ground must be firm and horizontal.



Establishing the connections

Hoses with a diameter of 38 mm or 50 mm can be connected to the pressure filter. The respective hose connectors are part of our scope of delivery.

- Use hoses with a diameter of 50 mm to keep the pressure losses in the hoses as low as possible.
- (i) If you use a filter starter for start-up, fill the product into the container prior to carrying out the following installation steps.
 - It is easier to remove the filter cover if you first remove all hoses from the filter cover.

Connecting the inlet

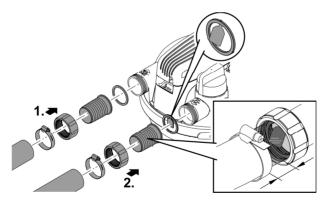
Only use pressure hoses approved for at least the maximum pump pressure to connect the outlet of the filter pump and the inlet of the pressure filter.

• Always use a hose clip to fasten the hose on a hose connector.

Connecting the outlet

Use a transparent hose connector with a flow lug. The transparent hose connector will allow you to assess the water quality after filtration. The flow lug will show you the water flow.

- Push the hose onto the hose connector until only two segments on the hose connector remain uncovered.
 - This will give you a sufficiently large view into the hose connector.
- Always use a hose clip to fasten the hose on a hose connector.



Connecting the dirt outlet

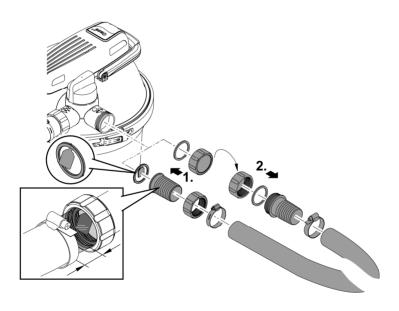
The soiled water resulting from cleaning can be used for fertilisation. Connect a hose and route it up to a suitable location (e.g. flower bed).

Use a transparent hose connector with a flow lug. The transparent hose connector will allow you to assess the degree of soiling of the water when cleaning the foam filters. The flow lug will show you the water flow.

- Push the hose onto the hose connector until only two segments on the hose connector remain uncovered.
 - This will give you a sufficiently large view into the hose connector.
- Always use a hose clip to fasten the hose on a hose connector.
- Install the black hose connector with the G2 outer thread on the outlet of the hose. Close the hose connector with the cover cap and the flat seal.

NOTE

Close the dirt outlet or the outlet of the connected hose with the cover cap and the flat seal. This prevents unintended emptying of the pond. Only remove the cover cap to drain dirty water.



Commissioning/start-up

NOTE

The unit will be destroyed if it is operated with a dimmer. It contains sensitive electrical components.

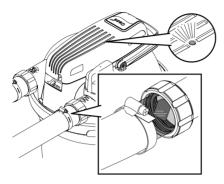
- ► Do not connect the unit to a dimmable power supply.
- The purely biological starter bacteria Oase AquaActiv BioKick activate the filter biology and ensure maximum performance of your pond filter within only a few weeks. They immediately start removing nitrite, ammonium and ammonia from the water. We recommend filling the container with Oase AquaActiv BioKick
 - during initial start-up,
 - after manual cleaning or replacing the foam filters,
 - after long shut-down periods or during start-up after a long winter break.

Start-up sequence:

- If required, fill the container with Oase AquaActiv BioKick. (→ Removing/positioning the filter cover)
- 2. Ensure that the hoses, cover cap for the dirt water outlet and the clamping ring with the safety latch are firmly connected.
- 3. Turn the turning valve to "Filter water".
- 4. Switch on the pond pump.
- 5. Only switch on the UVC clarifier when water emerges from the water outlet. (\rightarrow Switching the UVC clarifier on/off)
 - Never run the UVC clarifier without water flowing through.
 - If you are using Oase AquaActiv BioKick, leave the UVC clarifier turned off for 24 hours. This
 allows the starter bacteria to achieve optimum effectiveness.

Switching the UVC clarifier on/off

- Switching on: Plug the power plug into the outlet.
 - The unit switches on immediately.
 - The indicator lamp lights up.
 - The flow lug on the outlet will show you that water is flowing.
- Switching off: Pull the power plug from the outlet.



FCL0015

Operation

The pressure filter can remain in operation for the full pond season (the filter pump and the UVC clarifier are switched on).

- The biological filter elements are no longer active at water temperature of less than 10 °C.
- Shut down the unit at water temperatures below 8 °C or at the latest when freezing temperature are to be expected. (→ Decommissioning/winter storage)
- The UVC lamp is a wear part. Replace the UVC lamp after a specific operating duration to ensure optimum filter performance. (→ Replacing the UVC lamp)

Maintenance and cleaning

NOTE

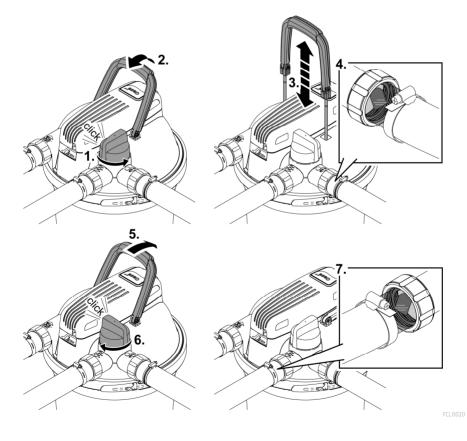
Do not use aggressive cleaning agents or chemical solutions. These agents can damage the housing, impair the function of the device and harm animals, plants and the environment.

Only clean the unit from the outside with clear water and a soft brush.

Cleaning the foam filters

The Easy Clean function is used to clean the foam filters. During cleaning, the filter pump is switched on so that the dirt water is transported out of the pressure filter.

- Turn the turning valve to guide the water in the container to the dirt water outlet. This prevents the dirt water from flowing back into the pond.
 - Beforehand, remove the cover cap from the outlet hose for the dirt water.
- Pull the cleaning handle to compress the foam filters. The dirt particles are removed and flow with the water via the dirt water outlet, for instance to a flower bed.
- The transparent hose connectors allow you to check the water flow and assess the degree of soiling in the water during cleaning on the dirt water outlet. As soon as the water runs clear, turn the turning valve back to "Filtering".
- After cleaning, close the dirt water hose or the dirt water outlet with the cover cap and the flat seal.

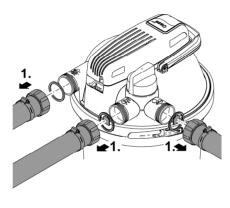


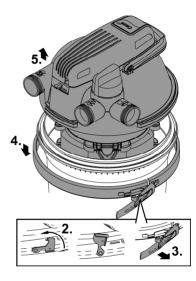
Removing/positioning the filter cover

Removing the filter cover

How to proceed:

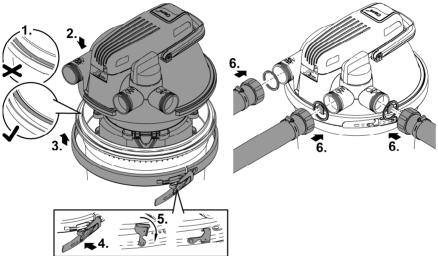
- Switch off the filter pump and pull the power plug of the UVC clarifier from the outlet.
- Remove all hoses from the filter cover (unscrew hose connectors).
- Undo the locking latch.
 - Use flat nose pliers if the locking latch is hard to move.
- Open the clamping ring and remove the filter cover.





Positioning the filter cover

- Ensure that the O-ring on the container is positioned correctly on the container rim.
 Moisten the seal with water or grease the seal, if necessary, so that the filter head is easier to push onto the container.
- Evenly and forcefully push the filter cover as far as possible onto the container.
 - The filter ring must make full contact with the container, otherwise the clamping ring will not close.
- Fasten the filter cover with the clamping ring and close the locking latch.
 - The locking latch prevents the clamping ring from coming loose accidentally, which would cause pond water to leak in an uncontrolled manner.
 - Use flat nose pliers if the locking latch is hard to move.
- Attach all hoses (screw hose connectors in place).



Cleaning the unit and washing or replacing the foam filters

Wear of the foam filters is caused by mechanical stress and normal ageing.

(i) Insert new foam filters at the start of the season.

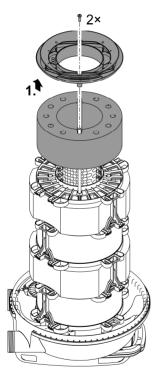
Disassembling the foam filter package

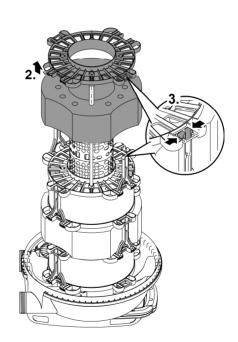
Prerequisite:

• The filter cover has been removed. (→ Removing the filter cover)

Place the filter cover upside down on a soft clean surface so that the foam filter package is on top.

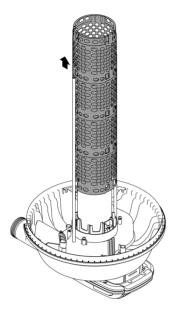
- Undo the two screws, remove the closing disc and remove the first foam filter.
- For every additional foam filter, undo the two spacers and remove the spacer disc and the foam filter.





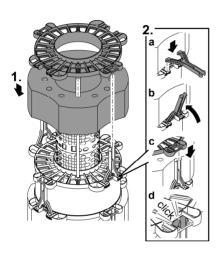
Cleaning

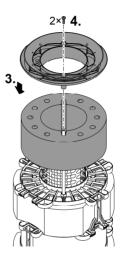
- Clean the container, the clamping ring, the filter cover, the UVC water housing and the meshed tube with a powerful water jet.
 - Pull off the meshed tube by pulling and simultaneously turning it clockwise.
- Wash each of the foam filters by forcefully compressing it under running water.
 - If necessary, replace the foam filters.



Assembling the foam filter package

- Push the foam filters onto the meshed tube in the intended order. (→ Installation sequence of the foam filters)
- Place a spacer disc on each foam filter and fasten it with two spacers each.
 - Insert the spacer into the spacer disc up to the stop and fold over the spacer with a slight rotary movement.
- Place the closing disc on the final foam filter (purple, 20 ppi). Fasten the closing disc to the two cleaning rods using the two screws.
- Position the filter cover on the container. (→ Positioning the filter cover)





FCL0024

Installation sequence of the foam filters FiltoClear 5000 FiltoClear 13000 FiltoClear 19000 FiltoClear 31000 10 ppi 30 ppi 30 ppi 30 ppi 20 ppi 10 ppi 10 ppi 30 ppi Foam filters 20 ppi 10 ppi 30 ppi 20 ppi 10 ppi 20 ppi

Removing/installing the UVC unit head

A CAUTION

The ultra-violet radiation of the UVC lamp can damage your eyes and skin.

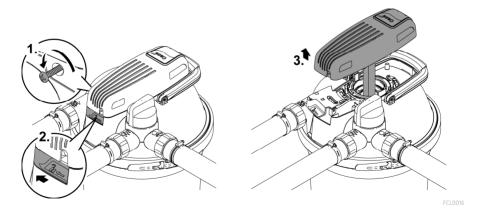
- ▶ Never operate the UVC lamp outside out the casing or in a damaged casing.
- Disconnect the unit from the power grid before starting any maintenance work or before replacing the UVC lamp.

The quartz glass and UVC lamp could break and cause cuts.

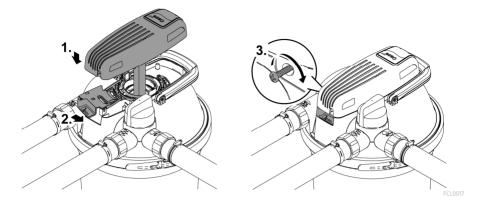
- ▶ Act with caution when performing work on the UVC clarifier in order to avoid cuts.
- ▶ Avoid shocks, impacts and abrupt movements to prevent the glass from breaking.
- I For safety reasons, the UVC lamp can only be turned on when the UVC clarifier is properly installed in the unit.

Removing the UVC unit head

- First pull the power plug of the UVC clarifier before removing the UVC unit head.
- Remove the locking screw, undo the opening ring and remove the UVC unit head.
- If it is not possible to remove the UVC unit head, a vacuum has built up in the quartz glass as a result of the UVC lamp cooling down.
 - Remedy: Switch on the UVC clarifier. The heat of the UVC lamp reduces the vacuum and the UVC unit head is pushed up with a plopping sound. Pull the plug of the UVC clarifier and remove the UVC unit head.



Installing the UVC unit head



Replacing the UVC lamp

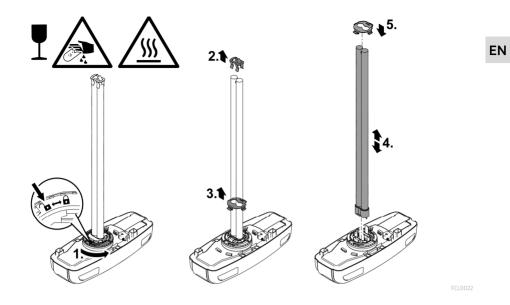
The UVC lamp is a wear part. Replace the UVC lamp once the indicated number of operating hours has been reached. This ensures optimum filtering performance.

FiltoClear	UVC lamp power	Replace UVC lamp after
5000	18 W	8000 h (one pond season)
13000	24 W	
19000	42 W (optionally 36 W)	42 W / 60 W: 12000 h
31000	60 W (optionally 55 W)	36 W / 55 W: 8000 h

Prerequisite:

- The UVC unit head has been removed. (→ Removing the UVC unit head)
- Only use UVC lamps, the identification and power data of which correspond to the information on the type plate. (→ Technical data)

- Removal: Turn the bayonet ring all the way to the "lock open" position to remove the holding plate and the UVC lamp.
- Installation: Turn the bayonet ring all the way to the "lock closed" position. Otherwise you cannot install the UVC unit head.
 - On delivery, the bulb of the UVC lamp is protected by a transport guard. The lamp guard is not required for the lamp function and does not need to be reinstalled.
- (1) If necessary remove a lamp guard stuck in the quartz glass as follows:
 - Remove the quartz glass. (\rightarrow Cleaning/replacing the quartz glass)
 - Carefully and steadily knock the rotor lid with the quartz glass against a firm surface. The lamp guard will slowly slide out of the quartz glass.
- OSRAM UVC lamps can only be installed without the holding plate. OASE therefore recommends using Philips UVC lamps.



Cleaning/replacing the quartz glass

The quartz glass is fastened in the filter head by a rotor cover so that no water can leak from the container interior.

• Replace the quartz glass if it is scratched or has become opaque. Otherwise the cleaning power of the UVC lamp is no longer sufficient.

A CAUTION

The quartz glass and UVC lamp could break and cause cuts.

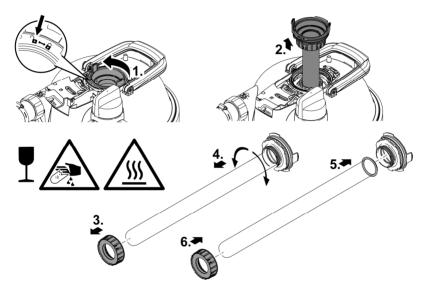
- ▶ Act with caution when performing work on the UVC clarifier in order to avoid cuts.
- ▶ Avoid shocks, impacts and abrupt movements to prevent the glass from breaking.

Prerequisite:

• The UVC unit head has been removed. (\rightarrow Removing the UVC unit head)

- Switch off the filter pump.
- Unlock the rotor cover (bayonet lock to "lock open").
- Remove the rotor cover with the quartz glass and, if applicable, the cleaning rotor.
 - Turn the turning valve to the dirt water outlet to eliminate any vacuum that may have built up in the container.

- Clean the quartz glass. If you are replacing the quartz glass:
 - Undo the clamping screw and carefully pull off the quartz glass with a slight tilting and twisting movement.
 - Clean the O-ring, replace it if it is damaged.
 - Grease the O-ring with OASE grease (order number 27872) and pull it over the rim of the quartz glass to avoid grease residue on the quartz glass.
 - Position the quartz glass on the rotor cover and turn the clamping screw up to the stop, otherwise it is not possible to install the rotor cover.
- Check the profile wear on the cleaning rotor. (\rightarrow Replacing the cleaning rotor)
- When installing the quartz glass, turn the rotor cover up to the stop (bayonet lock to "lock closed"). Otherwise you cannot install the UVC unit head.
- ① Condensate may form in the quartz glass. This condensate formation cannot be avoided, however, it does not impair function and safety.



Replacing the cleaning rotor

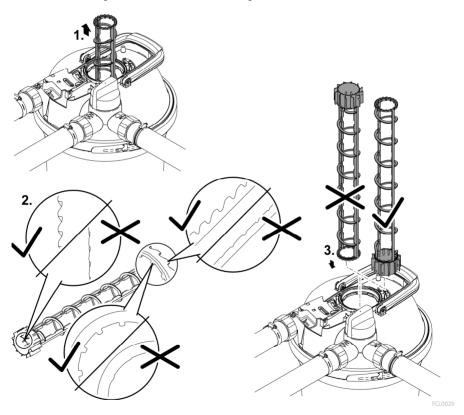
On the FiltoClear 19000 und FiltoClear 31000, an additional cleaning rotor is positioned above the quartz glass to clean the quartz glass with the aid of the water flow.

• Replace the cleaning rotor when it is worn.

Prerequisite:

• The quartz glass has been removed. (\rightarrow Cleaning/replacing the quartz glass)

- Check the profile wear at both ends and the inner surfaces of the cleaning rotor.
 If the profile is worn, the cleaning rotor will rotate sluggishly and has to be replaced.
- Insert the cleaning rotor in the UVC water housing.



Wear parts

- Foam filters
- UVC lamp, quartz glass and O-ring for quartz glass
- Cleaning rotor
- Replacement clamping screw
- Pipe connection FiltoClear 19000, 31000

Decommissioning/winter storage

Shut down the unit at water temperatures below +8 $^\circ \rm C$ or at the latest when freezing temperatures are expected.

- Remove as much water as possible from the containers, the hoses and connections.
- Thoroughly clean all components, check the unit for damage and replace damaged components.
- Store the filter cover, UVC clarifier and filter materials in a dry area protected against freezing. - Ensure that the storage place is inaccessible to children.
- Cover the container to prevent rain water from entering it.
- Secure the buried container so that it does not pose any risk of accident for persons or animals.

Troubleshooting

Malfunction	Possible cause	Remedy
No water emerges from the water	The filter pump is not switched on	Switch on the filter pump
outlet	The supply lines are clogged	Check the supply lines and clean them, if necessary
	The turning valve is not set to "Fil- ter water"	Turn the turning valve to "Filter water"
The flow rate is too low	The foam filters are clogged	Clean the foam filters
	The filter pump power is too low	Use a stronger filter pump
The indicator light on the UVC unit head is not lit	The power connection is faulty or the power plug is not plugged in	Check the power connection (power plug, fuse)
	The temperature switch has turned off the UVC lamp	Allow the UVC lamp to cool down
	The UVC lamp is defective	Replace the UVC lamp
The filter capacity is not satisfac- tory	The turning valve is not set to "Fil- ter water"	Turn the turning valve to "Filter water"
	The filter has only been used for a short time	Wait a few days/weeks
	The water or the pond is extremely soiled	Thoroughly clean the pond
	Too many fish and other pond ani- mals	Adhere to the reference value
	The foam filters are soiled	Clean the foam filters
	The quartz glass is soiled	Clean the quartz glass and the cleaning rotor
	The cleaning rotor rotates with dif- ficulty	Check the cleaning rotor for wear and replace, if necessary
	The cleaning rotor is not rotating due to soiling	 Clean the filter Clean the cleaning rotor Remove gravel from the UVC water housing and the foam filters Place the filter pump at a higher level to prevent it from drawing in coarse dirt Use a pump protection bag (Art. No. 34876) for the filter pump to prevent intake of coarse dirt If the flow rate is too low, use a stronger filter pump
	The wear limit of the UVC lamp has	

been reached (insufficient radiation power)

Technical data

Unit data

FiltoClear			5000	13000	19000	31000
UVC clarifier	Connection voltage	V AC	220-240	220-240	220-240	220-240
	Mains frequency	Hz	50/60	50/60	50/60	50/60
	Power consumption	W	18	24	42	60
	UVC power	W	18	24	42	60
	UVC lamp		18 W TC-L(UV-C)	24 W TC-L(UV-C)	36 W/42 W TC-L(UV-C)	55 W/60 W TC-L(UV-C)
	Protection type		IP68	IP68	IP68	IP68
	Max. permissible immer- sion depth in the water	m	0.1	0.1	0.1	0.1
	Length of power cable	m	5	5	5	5
Min. flow rate		l/h	2500	4500	6500	8500
Max. flow rate		l/h	5000	9000	13000	17000
Max. permissib	le pump pressure	bar	0.6	0.6	0.6	0.6
Max. permissib	le operating pressure	bar	0.2	0.2	0.2	0.2
Inlet	Connection		G2	G2	G2	G2
	Hose connector	mm	38, 50	38, 50	38, 50	38, 50
Outlet	Connection		G2	G2	G2	G2
	Hose connector, transpar- ent	mm	38, 50	38, 50	38, 50	38, 50
Dirt outlet	Connection		G2	G2	G2	G2
	Hose connector, transpar- ent	mm	38, 50	38, 50	38, 50	38, 50
Number of red foam filters			1	1	1	2
Number of blue	e foam filters		-	1	2	2
Number of purp	ple foam filters		1	1	1	1
Suitable for ma	x. pond volume	I	5000	13000	19000	31000
Suitable for ma	x. pond volume with fish	I	2500	7000	10000	15000
Suitable for ma	x. pond volume with koi	I	-	-	5000	7500
Permissible am operation	bient temperature during	°C	0 +35	0 +35	0 +35	0 +35
Permissible water temperature		°C	+4 +35	+4 +35	+4 +35	+4 +35
Dimensions	Length	mm	391	391	391	391
	Width	mm	382	382	382	382
	Height	mm	370	490	611	732
Weight	Without water	kg	8.0	8.8	9.6	10.3
	with water	kg	26	36	47	57

		Fresh water, pond water	
pH value		6.0 9.0	
Hardness	°dH	8 15	
Free chlorine	mg/l	<0.5	
Salt content	%	<0.5	
Temperature	°C	+4 +35	

Permissible water values

Spare parts



The use of original parts from OASE ensures continued safe and reliable operation of the unit.

Please visit our website for spare parts drawings and spare parts.

www.oase.com/ersatzteile

Disposal

NOTE					
Ŕ	 Do not dispose of this unit with household waste. Dispose of the UVC lamp and the unit by using the return system provided for this purpose. Render the unit unusable by cutting the cables. 				

Render the unit unusable by cutting the cables.

EN

Downloaded from www.watergardeningdirect.com

OASE GmbH

Tecklenburger Straße 161 48477 Hörstel, Germany ⓒ +49 (0) 5454 80-0 ➡ +49 (0) 5454 80-9353 info@oase.com

CE

77757/10-21